

**WE CLAIM:**

1. A method for encoding information, the method comprising:  
identifying a first block of data;  
accessing a database to search for the first block of data;  
producing a mapped second block of data if said first block of data is stored in said database; and  
mapping said first block of data to said mapped second block of data.
2. The method of claim 1, further comprising adding said first block of data and said mapped second block of data if said first block of data is not stored in said database.
3. The method of claim 1, further comprising cataloging said mapping step in the database.
4. The method of claim 1, further comprising compressing the first block of data.
5. The method of claim 4, wherein said compressing comprises using a compression algorithm.
6. The method of claim 1, wherein said mapping comprises mapping said first block of data using a quantum states of said mapped

second block of data.

7. The method of claim 6, wherein said mapping comprises lossless mapping of said first block of data.

8. The method of claim 1, further comprising filtering said mapped second block of data.

9. The method of claim 1, further comprising storing said mapped second block of data in said database.

10. The method of claim 1, further comprising sending mapped second block of data.

11. The method of claim 1, wherein said mapping comprises mapping all of said first block of data onto said mapped second block of data.

12. The method of claim 1, wherein said mapping comprises said first block of data to said mapped second block of data, in which said mapped second block of data includes a bit having quantum states, and wherein said quantum states represent said first block of data.

13. An information exchange system comprising:
- an encoder to map a block of information to an encoded block of data, wherein said encoded block represents said block of information as quantum numbers;
- a database accessible by said encoder to store and catalog said block of information and said encoded block, and to provide said encoded block to said encoder if said block of information is stored in the database; and
- a transmission medium to support said encoded block.
14. The information exchange system of claim 13, further comprising an input to receive said information.
15. The information exchange system of 14, wherein said input receives a plurality of streams of said information.
16. The information exchange system of claim 13, further comprising an identification node to identify a type of said block of information.
17. The information exchanges system of claim 13, further comprising a transmitter.
18. The information exchange system of claim 17, wherein said

transmitter comprises an antenna.

19. The information exchange system of claim 13, wherein said encoder receives the encoded block from the database, and applies the coded block to the block of information.

20. An encoder, comprising:  
an identifier to receive a block of information;  
a database to store an encoded block of data and to provide the encoded block of information upon receipt of said block of information;